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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,650	05/09/2006	Reinhold Elferich	DE 030387	1792

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
TRAN, THUY V	

ART UNIT	PAPER NUMBER
2821	

MAIL DATE	DELIVERY MODE
10/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,650	ELFERICH ET AL.	
	Examiner	Art Unit	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05/09/2006 & prel. amendment conc. filed*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-13* is/are rejected.

7)☒ Claim(s) *2,3 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05/09/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/09/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the Applicants' communication submitted on 05/09/2006 and preliminary amendment concurrently filed therewith. In virtue of this amendment, claims 1-14 are currently presented in the instant application.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 05/09/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings submitted on 05/09/2006 are accepted.

Claim Objections/Minor Informalities

3. Claims 2-3, 5, 9, and 11-13 are objected to because of the following informalities:

Claim 2, line 2, "the" (first occurrence) should be deleted; and "diodes" should be changed to --LEDs--;

Claim 3, line 2, "the" (first occurrence) should be changed to --an--;

Claim 3, line 4, "diodes" should be changed to --LEDs--;

Claim 5, line 3, "the" should be changed to --a--;

Claim 9, line 4, --existing-- should be inserted between "the" and "LEDs";

Claim 11, lines 2-3, "the color of the LEDs… amber/orange" should be changed to --one of the LEDs is of white color and another is of amber/orange--;

Claim 12, lines 2-4, "the color … the main light source LEDs (43) red" should be changed to --one of the subsidiary light source LEDs is of green color, another one of the

subsidiary light source LEDs is of blue/cyan, and the main light source LED is of red color--; and

Claim 13, lines 2-4, "the color ... the main light source LEDs (43) amber/orange" should be changed to --the subsidiary light source LEDs are of cyan/blue color, and the main light source LED is of amber/orange color--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1 and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pong et al. (U.S. Patent No. 7,178,971 B2; hereinafter "Pong") in view of Nalbant (U.S. Patent No. 5,615,093).

With respect to claim 1, Pong discloses, in Fig. 15, a resonant power LED control which comprises a single resonant converter for the simultaneous, independent brightness and color control of two LEDs (320, 325), which converter is formed substantially from a half or full bridge DC/AC converter with a control unit (see col. 8, lines 50-53; col. 8, line 63- col. 9, line 4), and a transformer [300] (see Fig. 15). Pong does not disclose a resonant capacitor.

Nalbant discloses, in Fig. 5, a resonant power control circuit comprising a resonant capacitor [78] connected at the output of an inverter [54, 56].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the power control of Pong with a resonant capacitor as taught by Nalbant so as to be able to block the DC component at the output of the inverter and provide an effective power signal to the LEDs since Nalbant indirectly teaches that the resonant capacitor configured in such way would help convert the wave output of the inverter to a high frequency sine wave voltage signal (see col. 5, lines 36-38).

With respect to claim 4, the combination of Pong and Nalbant do not disclose that several LEDs are joined together into groups of arrays connected in series each time. However, such difference is not of patentable merits since additional configuration of LEDs in series or in parallel with the existing LEDs would not affect the operation capability of the power control circuit of the combination with respect to the output power of its inverter. Therefore, such a claimed configuration of the LEDs would have been regarded as an obvious development to a person skilled in the art.

With respect to claim 5, the combination of Pong and Nalbant disclose that the voltage supply of the LEDs takes place via a secondary side [310, 315] of the transformer [300] (see Pong; Fig. 15).

With respect to claim 6, the combination of Pong and Nalbant disclose that the transformer [300] has a secondary winding [310, 315] to which the LEDs are connected in anti-parallel (see Pong; Fig. 15).

With respect to claim 11, the combination of Pong and Nalbant does not specifically disclose that the color of one of the LEDs is white and another one is amber/orange. However, this difference is not of patentable merits since such a selection of color of the LEDs does not affect the operational capability of the power control of the combination of Pong and Nalbant with respect to the output power of its inverter. Therefore, to employ one of the LEDs in white and another one in amber/orange in the combination of Pong and Nalbant for an expected color output would have been deemed obvious to a person skilled in the art.

With respect to claim 7, the combination of Pong and Nalbant disclose that the transformer [300] has two secondary windings [310, 315] to which the LEDs [335, 325] are connected such that they are supplied with current in succession (see Pong; Fig. 15).

With respect to claim 8, the combination of Pong and Nalbant disclose that the transformer [300] has a central tap at the secondary side, to which tap the common cathode of the LEDs [320, 325] is connected (see Pong; Fig. 15).

With respect to claim 9, the combination of Pong and Nalbant disclose that a further LED [335] is connected as a main light source between the central tap and the common cathode of the LEDs [320, 325] that serve as subsidiary light sources.

With respect to claim 10, the combination of Pong and Nalbant does not disclose that a switching diode is used instead of one of the subsidiary light source LEDs. However, this difference is not of patentable merits since the switching diode has been commonly practiced in the art as its controlling current flow in one direction, and therefore, configuring such a switching diode in lieu of one of the subsidiary LEDs upon a desired application or environment of use would have been deemed obvious to a person skilled in the art.

With respect to claim 12, the combination of Pong and Nalbant disclose that the color of one of the subsidiary light source LEDs is green, another one of the subsidiary light source LEDs is blue/cyan, and that of the main light source LEDs is red (see Pong; Fig. 15; col. 3, lines 25-27).

With respect to claim 13, the combination of Pong and Nalbant does not disclose that the color of the subsidiary light source LEDs is cyan/blue and that of the main light source LEDs is amber/orange. However, this difference is not of patentable merits since such a selection of color of the LEDs does not affect the operational capability of the power control of the combination of Pong and Nalbant with respect to the output power of its inverter. Therefore, to employ the cyan/blue LEDs as the subsidiary light sources and the amber/orange LEDs as the main light source in the combination of Pong and Nalbant for an expected color output would have been deemed obvious to a person skilled in the art.

Allowable Subject Matter

7. Claims 2-3 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- A resonant power LED control characterized in that light emitted by the LEDs forms an input value for the control unit, in combination with the remaining claimed limitations as called for in claim 2 (claim 3 would be allowable since it is dependent on claim 2); and
- A resonant power LED control characterized in that the LEDs are connected to filter capacitors, in combination with the remaining claimed limitations as called for in claim 14.

Citation of relevant prior art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Prior art Bockle et al. (U.S. Patent No. 6,826,059 B2) discloses a driver for LEDs;

Prior art He (U.S. Patent No. 6,359,392 B1) discloses a driver for LEDs; and

Prior art Bockle (U.S. Patent No. 5,053,937) discloses a method for controlling a resonant converter switching power supply.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

09/29/2007

THUY V. TRAN
PRIMARY EXAMINER